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09/680,524	10/06/2000	Joseph B. Rowlands	5580-00600	2296

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EXAMINER

HUYNH, KIM T

ART UNIT

PAPER NUMBER

2189

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Please find below and/or attached an Office communication concerning this application or proceeding.

OK

# Office Action Summary

Application No.

09/680,524

Applicant(s)

ROWLANDS ET AL.

Examiner

Kim T. Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10/6/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 27, the preamble "A method comprising" renders the claim indefinite because it is not suggesting what the scope of the claimed invention is. –

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Bell et al. (US Patent 6,021,451)

a. As per claims 1 and 27(as best understood), Bell discloses a system comprising:

- a first agent (fig.2, 130) configured to generate a first signal, wherein said first signal is indicative in a first state, that said first agent is available to participate in subsequent transactions, and wherein said first signal is indicative, in a second state, that said first agent is unavailable to participate in subsequent transactions; (col.5, lines 50-62), (col.6, lines 1-67), (col.7, lines 1-42) wherein generated 1<sup>st</sup>

requesting signal if it is available to participate begins transaction. Second transaction resending with request out-of-order which implies not available allow for completion or vice versa complete transaction available)

- a second agent (fig.2, 140) coupled to receive said first signal, wherein said second agent is configured to initiate a first transaction for which said first agent is a participant responsive to said a second transaction for which said first agent is a non-participant responsive to said first signal being in said second state. [(col.8, lines 21-67), (col.9, lines 1-47, wherein outbound receive request signal and stored in queue, 2<sup>nd</sup> transaction resending with request out-of-order which implies not available allow for completion or vice versa complete transaction available (col.6, lines 1-17))]

b. As per claim 10, Bell discloses a third agent configured to generate a second signal indicative, in a first state, that said third agent is available to participate in subsequent transactions, and indicative, in a second state, that said third agent is unavailable to participate in subsequent transactions, and indicative, in a second state, that said third agent is unavailable to participate in subsequent transactions, and wherein said second agent is coupled to receive said second signal, and wherein said third agent is a nonparticipant in said second transaction even if said second signal is in said second state. (col.5, lines 50-62), (col.6, lines 1-67), (col.7, lines 1-42) wherein generated 1<sup>st</sup> requesting signal if it is available to participate begins transaction. Second transaction resending with request out-of-order which implies not available allow for completion or vice versa complete transaction available, meanwhile transactions are generated (col.8, lines 1-54), all transactions are decode and place them in queue waiting to dispatch the arbitration is removed from top of request queue for issuing)

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c. As per claim 18, Bell discloses an agent comprising:

- a first storage location configured to store a transaction to be initiated by said agent;  
(col.2, lines 61-67), (col.8, lines 21-41)
- a circuit (fig.4, 400, bridge) coupled to said first storage(inbound & outbound queues) location and coupled to receive a first signal indicative of whether or not a second agent is available to participate in transactions, and wherein said circuit is configured to selectively inhibit initiation of said transaction if said first signal indicates that said second agent is unavailable to participate in transactions, dependent on whether or not said second agent is a participant in said transaction. (col.8, lines 21-53)

d. As per claims 2, 11, 19, 28, 35, 36, Bell discloses second agent is configured to inhibit initiating said first transaction if said first signal is in said second state. [(col.8, lines 21-67), (col.9, lines 1-47, wherein outbound receive request signal and stored in queue, 2<sup>nd</sup> transaction resending with request out-of-order which implies not available allow for completion, blocking transaction (col.6, lines 1-67))]

e. As per claims 17, 22, 29, Bell discloses first transaction includes an address, and wherein said second agent is configured to determine if said first agent is a participant in said first transaction by decoding at least a portion of said address. (col.8, lines 54-63), wherein the decoder 415 places requests into outbound and inbound queues included tag field which information of the transactions)

f. As per claims 3 and 30, Bell discloses first agent is said participant in said first transaction if said first agent is targeted by said first transaction. (col.2, lines 61-67)

g. As per claims 4 and 31, Bell discloses first agent is said participant in said first transaction if said first agent includes an internal cache to be snooped in response to said first transaction.(col.7, lines 23-29)

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- h. As per claims 5 and 32, Bell discloses first agent is said participant in said first transaction if said first agent is a cache and said first transaction is cacheable. (col.7, lines 23-29)
- i. As per claims 6, 20, 33, Bell discloses second agent is configured to inhibit initiating said first transaction by preventing arbitration for a bus on which said first transaction is to be transmitted. [(col.8, lines 21-63), bridge 400 arbitrate between the inbound and outbound agent which is 1<sup>st</sup> and 2<sup>nd</sup> agent inhibited or committed, col.9, lines 18-41); (col.8, lines 21-67), (col.9, lines 1-47, wherein outbound receive request signal and stored in queue, 2<sup>nd</sup> transaction resending with request out-of-order which implies not available allow for completion, blocking transaction (col.6, lines 1-67))]
- j. As per claims 7, 21, 34, Bell discloses second agent is configured to inhibit initiating said first transaction by transmitting an invalid command if said second agent wins an arbitration for a bus on which said first transaction is to be transmitted. (col.9, lines 18-31), (col.10, lines 7-13
- k. As per claim 8, Bell discloses first agent comprises a queue configured to store transactions until the transactions are acted upon by said first agent, and wherein said first agent is configured to generate said first signal responsive to a number of free entries of said queue. (col.5, lines 54-61), (col.9, lines 54-62)
- l. As per claim 9, Bell discloses first agent is configured to generate said first signal in said second state responsive to 1 or fewer entries being free. (col.5, lines 54-61), wherein other requests still pending)
- m. As per claim 12., Bell discloses the system further comprising a third agent, wherein said first agent is configured to assert said first signal in said second state if said first agent is unavailable to participate in subsequent transactions, and wherein said third agent is configured to assert said first signal in said second state if said third agent is unavailable to participate in additional

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transactions. (col.5, lines 50-62), (col.6, lines 1-67), (col.7, lines 1-42) wherein generated 1<sup>st</sup> requesting signal if it is available to participate begins transaction. Second transaction resending with request out-of-order which implies not available allow for completion or vice versa complete transaction available, meanwhile transactions are generated (col.8, lines 1-54), all transactions are decode and place them in queue waiting to dispatch the arbitration is removed from top of request queue for issuing)

n. As per claim 13, Bell discloses first signal is indicative of whether or not a memory transaction is to be issued, and wherein said second transaction is an input/output transaction. (col.8, lines 21-48)

o. As per claim 14, Bell discloses first signal is indicative of whether or not an input/output transaction is to be issued, and wherein said second transaction is a memory (col.8, lines 21-48)

p. As per claims 15, 16, Bell discloses the system further comprising a third agent, and wherein said first agent is configured to generate a second signal indicative in a first state, that said first agent is available to participate in subsequent transactions and indicative, in a second state, that said first agent is available to participate in subsequent translations, and wherein said third agent is coupled to receive said second signal, and wherein said third agent is configured to initiate a third transaction in which said first agent is a non participant even if said second signal is in said second state. (col.5, lines 50-62), (col.6, lines 1-67), (col.7, lines 1-42) wherein generated 1<sup>st</sup> requesting signal if it is available to participate begins transaction. Second transaction resending with request out-of-order which implies not available allow for completion or vice versa complete transaction available, meanwhile transactions are generated (col.8, lines 1-54), all transactions are decode and place them in queue waiting to dispatch the arbitration is removed from top of request queue for issuing)

q. As per claim 23, Bell discloses the circuit (fig.4, 400) is configured to initiate said transaction if said second agent is a non-participant in said transaction. (col.8, lines 21-54)

r. As per claim 24, Bell discloses the circuit is configured to determine that said second agent is a non-participant in said transaction by decoding at least a portion of an address of said transaction. (col.8, lines 21-54)

s. As per claim 25, Bell discloses the agent further comprising a queue including said first storage location, wherein said queue is configured to store a plurality of transactions to be initiated by said agent. (col.8, lines 21-54), wherein inbound and outbound queues stored plurality of decoding transactions)

t. As per claim 26, Bell discloses the circuit (fig.4, 400, 451) is coupled to receive a second signal indicative of whether or not a third agent is available to participate in transactions, and wherein said circuit is configured to selectively inhibit initiation of said transaction if said second signal indicates that said third agent is unavailable to participate in transactions, dependent on whether or not said third agent is a participant in said transaction. (col.8, lines 21-63)

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Huang et al. [USPN 6,092,137] discloses state machine logic pools

Bell et al. [USPN 6,321,309] discloses memory arbitration scheme

*Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703)305-5384 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 8:30AM- 6:30PM.*



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*If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815 or via e-mail addressed to [mark.rinehart@uspto.gov]. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-7249 for regular communications and (703)746-7238 for After Final communications.*

*Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5631.*

KTH

March 5, 2003

  
RUPAL DHARIA  
PRIMARY EXAMINER